

REMARKS

Claims 1-3, 7-9, 12-13 and 15-20 remain pending in this application. Claims 4 and 10 were canceled in a prior response. Claims 5, 6, 11, and 14 are canceled by this response, and claims 15-20 are added by this response. Claims 1-3, 7-9, and 12-13 are amended in this response to clarify features of the invention and address objections to certain informalities. Support for the amendments and for the new claims can be found throughout the specification, figures and original claims. Specifically, page 1, lines 17 – 25, and page 2, lines 13 – 17, provide the definitions of metadata, essence data, and link data. Page 3, lines 5 – 31, and page 4, lines 22 – 28, clarify the process of transferring the first or second essence data into third essence data not comprised in metadata. Page 4, line 36 through page 5, line 20 describe the employment of a graphical user interface to perform the activities of the method. Page 2, lines 3 – 5 specify that the method improves the process of cleaning a metadata database. Page 4, lines 30 - 34 specify the process of deleting metadata items from the database. Thus, it is respectfully submitted that no new matter is added by these amendments.

Objection to Claims 1-3, 5-9, and 11-14

Claims 1-3, 5-9, and 11-14 are objected to for certain informalities. Claims 1-3, 7-9, 12, and 13 have been amended in accordance with the comments in the Office Action to address the mentioned informalities. Claims 5, 6, 11, and 14 have been canceled. In view of the amendments to claims 1-3, 7-9, 12, and 13, Applicants respectfully submit that the objection to claims 1-3, 7-9, 12, and 13 is satisfied and should be withdrawn.

Rejection of claims 1-3, 5-9, and 11-14 under 35 U.S.C. 102(b)

Claims 1-3, 5-9 and 11-14 are rejected under 35 U.S.C. 102(b) as being unpatentable over Depledge et al. (U.S. Patent No. 5,899,988; hereinafter “Depledge”). Claims 5, 6, 11, and 14 have been canceled by this amendment. In view of the cancellation of claims 5, 6, 11, and 14, it is respectfully submitted that the rejection of claims 5, 6, 11, and 14 is now moot and should be withdrawn.

Amended independent claim 1 provides a method for processing metadata. The metadata comprises essence data and link data. Essence data includes at least one of text, picture, video and audio data. A first metadata item from a metadata database is provided. The first metadata item includes first essence data and/or link data. The link data directly or indirectly points to second essence data different from the first essence data. The first essence data and/or the second essence data are transferred into third essence data. The third essence data is multimedia data not comprised in metadata. A new file outside the metadata database is created. The third essence data is stored into the new file.

The present claimed method is useful in data systems that process multimedia data files, wherein the multimedia data files have associated metadata used as index information, stored in a separate metadata database. It is common practice, in user interfaces that handle multimedia data and employ metadata, to present a particular data item to the user to represent the entire data item. The specification defines such a particular data item as “essence data,” or data “which serves as a proxy by which the metadata will be presented to the user in any user interface” (Application page 4, lines 13 - 17). The associated metadata is comprised of both essence data, that is, data that “comprises at least one of text, picture, video or audio data,” and link data, “wherein the link data directly or indirectly points to second essence data different from the first essence data,” as recited in claim 1. Thus, the target of the link may be essence data that is stored in the metadata database, or essence data that is comprised of multimedia files not in the metadata database. When multimedia files are deleted, the metadata database should be updated to remove the associated metadata for the deleted multimedia files. However, the possibility exists that a metadata essence item is linked to by multiple metadata links associated with multiple multimedia data files and thus should not be deleted. The claimed method solves this problem by converting metadata essence items to essence items that are not in the metadata database, i.e., “transferring the first essence data and/or said second essence data into third essence data, the third essence data being multimedia data not comprised in metadata” and storing the third essence data into “a new file outside the metadata database” as recited in claim 1.

Depledge describes a method and system for database processing which provide bitmap indexing of data tables with high granularity locking, in order to ensure that the bitmap indices properly reflect changes to the database when processing requires accessing

those indices while not unnecessarily restricting access to indices that were unchanged (Depledge col. 3, lines 54 – 64, and col. 4, lines 6 – 20). The method involves generating an additional set of bitmap indices, called “differential records,” to represent the index entries that have been modified since the last time the index was regenerated (Depledge col. 6, line 57 – col. 8, line 23, and Figs. 6 – 10). When database processing requires accessing the bitmap index data, the index is read and the differential records are applied to it so that the index reflects the interim changes (Depledge Abstract).

The Office Action asserts that Depledge teaches providing first metadata that includes essence data and metadata link data, transferring said first essence data into new essence data, and storing said new essence data in a memory. Applicants respectfully disagree.

First, the Office Action erroneously asserts that the bitmap indices described in Depledge constitute metadata and essence data. The term “metadata” is in common usage and is defined as “data about data,” but more specifically is well known as being “structured, encoded data that describe characteristics of information-bearing entities to aid in the identification, discovery, assessment, and management of the described entities” (American Library Association, Task Force on Metadata *Summary Report*, June 1999). The definition of what constitutes metadata is thus dependent on the context in which the data and metadata are being used. The example cited in the Office Action, however, that the customer number or the customer location is metadata because it “represents metadata about customers” (Office Action page 3, lines 14-16), is an incorrect application of the definition of metadata. The customer number and location are data, not metadata. Metadata in the context cited would be, for example, data defining the structure of the customer number table. The decision to structure the location data as a bitmap index in order to improve storage and processing efficiency does not change the location data to metadata, but merely changes its physical representation in the processing system. Moreover, Depledge nowhere proposes any processing of customer numbers by the method it describes, since it explicitly states that it would be inappropriate to store customer numbers as bitmap indices, due to the high cardinality of the customer number data item (Depledge col. 2, lines 29 – 31). Therefore, Depledge neither discloses nor suggests “providing a first metadata item from a metadata database, the first metadata item including first essence data and/or link data” as recited in claim 1.

Regarding essence data, the specification of the present claimed arrangement defines essence data as “data like text, pictures, videos, and audio samples” (Application page 3, lines 21 – 22), which is “designed to be human understandable or perceptible and which serves as the proxy by which the metadata will be presented to the user in any user interface” (Application page 4, lines 14 – 17). The specification further provides as an example of essence data “a picture of the Eiffel Tower . . . as representative image of Paris” (Application page 6, lines 18 – 20). Claim 1 recites that “essence data comprises at least one of text, picture, video or audio data.” The bitmap indices of Depledge are neither essence data nor link data. They are not “text, picture, video or audio data” and are not designed to be human understandable or perceptible or to serve as the proxy by which the metadata will be presented to the user. They are instead explicitly designed to be efficient in terms of storage space occupied and speed of processing (Depledge col. 2, lines 12 – 23). Presentation to a user of a bitmap index would provide no understandable information to a user in the absence of a specific interpretive context for the bitmap supported by a custom designed interface to decode and present the information represented by the bitmap index. Thus, the bitmap indices of Depledge do not constitute either metadata or essence data. They are not “metadata comprising essence data and link data, wherein essence data comprises at least one of text, picture, video or audio data” as recited in claim 1. Depledge completely fails to disclose or suggest “providing a first metadata item from a metadata database, the first metadata item including first essence data and/or link data” as recited in claim 1. That is, disclosures of the Depledge do not show a relationship between the essence data and the link data, where the reference discloses “metadata”.

Moreover, even if the customer number were considered to be metadata and essence data, Depledge fails to disclose or suggest “transferring the first essence data and/or said second essence data into third essence data, the third essence data being multimedia data not comprised in metadata” as further recited in claim 1. The passage cited merely describes the structure and content of a bitmap index, not any activity of transferring essence data into other essence data (Depledge col. 2 lines 37 – 49). Neither in the cited passage nor elsewhere is there disclosure or suggestion of “transferring the . . . essence data into third essence data, the third essence data being multimedia data not comprised in metadata” as recited in claim 1. Instead, Depledge describes creating new indices to represent data values that have been modified since the last time the index file was regenerated (Depledge col. 8, lines 37 – 42).

The new indices are not created by “transferring the . . . essence data into third essence data” as recited in claim 1 of the present claimed arrangement.

In view of the above remarks it is respectfully submitted that the rejection of claim 1 is satisfied and should be withdrawn.

Claims 2 and 3 are dependent on claim 1 and are considered patentable for the reasons presented above with regard to claim 1. Claim 3 is also considered patentable because Depledge nowhere discloses or suggests that “said second essence data is included in second metadata as essence data” as recited in claim 3. Depledge does not describe the creation of essence data, but rather the use and updating of bitmap indices for more efficiently processing data in a database (Depledge col. 6, lines 7 – 17). This process and method are completely unlike “processing metadata . . . comprising essence data” as recited in claim 1, wherein “second essence data is included in second metadata as essence data” as recited in claim 3. In Depledge, the process of updating bitmap indices does not include use of a metadata database, and no essence data as defined in claim 1 is being processed at any time. Thus, Applicants respectfully request that the rejection of claims 2 and 3 be withdrawn.

Amended independent claim 7 discloses a device for processing metadata. The metadata comprises essence data and link data, and essence data comprises at least one of text, picture, video and audio data. A first metadata item is provided from a metadata database, the first metadata item including first essence data and/or link data. The link data directly or indirectly points to second essence data different from the first essence data. The first essence data and/or the second essence data is transferred into third essence data. The third essence data is multimedia data not comprised in metadata. A new file is created outside the metadata database. A device is provided for storing the third essence data into the new file.

Claim 7 contains features similar to claim 1 and is considered patentable for the reasons presented earlier with regard to claim 1. Claim 7 is further considered patentable because Depledge nowhere discloses or suggests a means for “transferring the first essence data and/or said second essence data into third essence data, the third essence data being multimedia data not comprised in metadata” as recited in claim 7. The operations described in Depledge involve the creation of new bitmap index files as differential records. As

presented earlier, such files are not essence data, nor are they “multimedia data not comprised in metadata” as recited in claim 7. If the bitmap indices were to be considered metadata, they could not concurrently be considered “data not comprised in metadata” as recited in claim 7. Thus, it is respectfully submitted that the rejection of claim 7 is satisfied and should be withdrawn.

Claims 8 and 9 are dependent on claim 7 and are considered patentable for the reasons presented above with regard to claim 7. Claim 13 is dependent on claim 9 and is considered patentable for the reasons presented above. Thus, Applicants respectfully request withdrawal of the rejection of claims 8, 9, and 13.

Claim 12 is dependent on claim 3 and is considered patentable for the reasons presented above with regard to claim 3. Thus, Applicants respectfully request that the rejection of claim 12 be withdrawn.

In view of the above remarks and amendments to the claims, it is respectfully submitted that Depledge does not anticipate the present claimed arrangement. Therefore, it is respectfully submitted that the rejection of claims 1-3, 5-9, and 11-14 as being anticipated by Depledge is satisfied and should be withdrawn.

Rejection of claims 1-3, 5-9, and 11-14 under 35 U.S.C. 102(e)

Claims 1-3, 5-9, and 11-14 are rejected under U.S.C. 102(e) as being anticipated by Jain et al (US Patent 6,567,980 B1, hereinafter “Jain”). Claims 5, 6, 11, and 14 have been canceled by this amendment. In view of the cancellation of claims 5, 6, 11, and 14, it is respectfully submitted that the rejection of claims 5, 6, 11, and 14 is now moot and should be withdrawn.

Jain describes a system and method for cataloging multimedia according to predefined or user definable metadata. The metadata in Jain is either data that is included in separate tracks of a video file, or is created by the user during video cataloging. It is used to index and retrieve encoded video files. Jain further describes converting metadata tracks of

the video to produce displayable frames hyperlinked to the displayable data, and an interface to support selecting and displaying links between displayable frames (Abstract). The metadata tracks comprise keyframes, closed-caption text, keywords, and other metadata supplied in the video file (Jain Figure 6 and cols. 7–8, Table 1). User defined annotations may also be added, which constitute new metadata essence (Jain col. 4, lines 30-36). Jain also describes creating new metadata links based on the time codes associated with a video (Jain col. 13, lines 28-29). The only hyperlinking described in Jain is accomplished by means of a time code that links or synchronizes metadata items to the associated video frames.

The Office Action asserts that Jain teaches “providing first metadata, . . . transferring said first metadata essence data and/or said further essence data . . . into new essence data . . .; and storing and providing said new essence data in said memory” (Office Action page 5, lines 10-19). Applicants respectfully disagree.

Amended independent claim 1 includes “transferring the first essence data and/or said second essence data into third essence data, the third essence data being multimedia data not comprised in metadata; creating a new file outside the metadata database; and storing the third essence data into the new file.” Jain fails to disclose or suggest creating new files outside the metadata database, or transferring essence data from the metadata database to new files outside the metadata database. Jain nowhere describes or suggests converting any metadata essence to essence that is not comprised in metadata or transferring any metadata essence to a file not comprised in metadata. Instead, Jain proposes adding additional metadata tracks to the video file (Jain col. 7, lines 5-13; col. 9, lines 11-15; and col. 10, lines 57-64). This is completely unlike the present claimed arrangement, which, from “a first metadata item in a metadata database,” transfers “the first essence data and/or said second essence data into third essence data, the third essence data being multimedia data not comprised in metadata” as recited in claim 1. Thus, Applicants respectfully submit that the rejection of claim 1 is satisfied and should be withdrawn.

Claims 2 and 3 are dependent on claim 1 and are considered patentable for the reasons presented regarding claim 1. Thus, Applicants respectfully request withdrawal of the rejection of claims 2 and 3.

Independent claim 7 contains features similar to the features of claim 1 presented above, and thus the remarks presented above regarding claim 1 also apply to claim 7.

Claims 8 and 9 are dependent on claim 7 and are considered patentable for the reasons presented regarding claim 7. Thus, Applicants respectfully request withdrawal of the rejection of claims 8 and 9.

Jain also fails to describe features that enable reducing the amount of metadata or cleaning metadata essence from the metadata database, as provided in claims 12 and 13. Jain neither discloses nor suggests automatically deleting said second metadata from the metadata database, as provided in claims 12 and 13. While the Office Action asserts that the data types of Jain are derived from a virtual base class that includes functions such as deletion, and infers therefrom that data in Jain may be deleted, Jain is completely silent regarding the process of deleting records from a database. The simple capability of deleting a data item is in no way equivalent to the process of automatically cleaning up a linked database by removing no longer used data items, or “automatically deleting said second metadata item after the third essence data is stored into the new file” as recited in claims 12 and 13. Thus, Applicants respectfully submit that the rejection of claims 12 and 13 is satisfied and should be withdrawn.

In view of the above remarks and amendments to the claims, it is respectfully submitted that Jain does not anticipate the present claimed arrangement. Therefore, it is respectfully submitted that the rejection of claims 1-3, 5-9, and 11-14 as being anticipated by Jain is satisfied and should be withdrawn.

Claims 15-20 have been added by this response. Claim 15 provides a device as claimed in claim 8, for the purpose of “cleaning a metadata database” that further comprises “means for deleting from the metadata database the first and/or the second metadata item that was transferred to the third essence data outside the metadata database.” Claim 19 provides a method for cleaning a metadata database according to the method of claim 1, “further comprising the step of deleting from the metadata database the first and/or the second metadata item after it was transferred to the third essence data outside the database.” As

presented earlier with regard to claim 1, Jain neither discloses nor suggests a method or apparatus for cleaning a metadata database. Jain neither discloses nor suggests “means for deleting from the metadata database” or “method for cleaning a metadata database” or for transferring the first and/or the second metadata item “to the third essence data outside the metadata database” as recited in claim 15 and claim 19. Also, as presented earlier with regard to claim 1, Depledge neither discloses nor suggests a method or apparatus for cleaning a metadata database, since Depledge is dealing with data rather than metadata. Thus, Depledge, similar to Jain, neither discloses nor suggests “means for deleting from the metadata database” or “method for cleaning a metadata database” or for transferring the first and/or the second metadata item “to the third essence data outside the metadata database” as recited in claim 15 and claim 19.

Claim 16 further provides that the means for deletion of the first and/or second metadata item deletes the items automatically upon storing the third essence data. Claim 20 provides a method for cleaning a metadata database according to claim 19 wherein the step of deleting the first and/or second metadata item is performed automatically. As Jain is silent regarding automatic deletion of metadata, Jain fails to anticipate this feature. Because Depledge is dealing with data rather than metadata, Depledge also fails to disclose or suggest this feature.

Claim 17 provides that essence data is transferred into third essence data without format transformation, and claim 18 provides that first and second essence data is combined into third essence data. Since Jain does not disclose or suggest creating third essence data outside the metadata database, Jain fails to anticipate this feature. Similarly, Depledge does not disclose or suggest creating third essence data outside the metadata database.

It is therefore respectfully submitted that claims 15-20 are patentable for the above reasons and for the reasons presented earlier regarding independent claims 1 and 7.

Having fully addressed the Examiner's rejections, it is believed that, in view of the amendments and remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is

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of the opinion that such action cannot be taken, the Examiner is invited to contact the applicant's attorney at the phone number below, so that a mutually convenient date and time for a telephonic interview may be scheduled.

No additional fee is believed due. However, if a fee is due, please charge the fee to Deposit Account 07-0832.

Respectfully submitted,
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